



Preoperative Phase

Goals:

- Provide patient education to prepare for surgery, diminish inflammation, reduce swelling, and decreased pain.
- Restore normal range of motion with emphasis on extension (heel prop/prone hang)
- Restore Muscle Voluntary Muscle Activities/Decrease muscle atrophy

Brace: Elastic-Wrap or Knee Sleeve to reduce swelling (as needed)

Weight Bearing as tolerated

Cryotherapy/Elevation: 10-20 minutes with knee in full extension and leg elevated above heart

Exercises

- Hamstring/Gastroc stretching
- Passive Knee extension to 0
- Passive knee flexion to tolerance (heel slides)
- Straight Leg Raise series (3 way – flexion, abduction, extension)
- Close Chain strengthening
- Stationary Bike

Postoperative Phase (Initial Instructions)

- Brace/Crutches 3 weeks
- AROM Hamstrings at 3 weeks
- Resisted Hamstrings at 5 weeks
- Hamstring Graft: no hip extension, hamstring stretching, or HS Curl until post op 3+ weeks.

Phase 1 (Day 1-Day 7)

Weight bearing: Bilateral axillary crutches, weightbearing as tolerated with brace locked

Goals:

- Restore full passive knee extension
- Reestablish Quadriceps Control by week **1 post op** (Russian Stimulation with Quad Sets)
- Diminish joint swelling/pain
- Restore patellar mobility
- Knee flexion to 90 degrees by week **1 post op**
- Independent SLR by week **1 post op**

Exercises

- Russian with Quad Set
- Quads sets for HEP – 10 minutes every hour
- Ankle Pumps with T-Band
- Overpressure into full, passive knee extension
- Active assisted and passive knee extension
- Straight leg raises (4 way – flexion, extension, abduction, adduction)
- Hamstring stretch/Gastroc stretch
- Closed chain strengthening – mini squats, step ups, weight shifts
- Manual Therapy – soft tissue massage for edema control, patellar mobs, PROM

- Unilateral Treadmill for gait training

Phase 2 (Day 8-Day 14)

Goals

- Establish full and equal hyperextension
- Restore patellar mobility
- Progress knee flexion to 110

Exercises

- Continue phase 1 exercises with focus on restoring quad control, ROM
- Initiate SAQ 90-30 degrees
- Single Leg Balance
- Calf Raises
- Bilateral Leg Press 45-0 degrees
- Initial Bilateral Treadmill
- Standing HS Curl

Phase 3: Early Rehabilitation (Week 3-8)

Goals

- DC Brace at week 3 post op
- Normalize gait by week 3 post op with no extension lag
- Progress knee flexion >135 by week 5
- Full ROM by end of week 6

Exercises

- Continue *phase 1-2 exercises* (DC quad sets, Active Assisted Flexion, SLRs as needed)
- Stationary Bike
- MultiHip
- Unilateral Leg Press (initiate eccentric at week 6)
- Bilateral Calf Raises on Leg Press
- Dynamic Balance
- Open Chain Resistive HS Curls at week 6 post op
- Step Ups

Phase 4: Advance Strengthening (Week 9-12)

Goals

- Maximize strength in preparation for running/return to sport
- Unilateral Hop Test at end of week 12

Exercises

- End of week 8: add weighted squats
- End of week 9: add lunges
- End of week 10: eccentric step downs

Post Rehab (Week 12+)

Goals

- Review gym program
- Gradual return to function related to sport
- Lateral movement drills
- Plyometrics
- Treadmill Running